

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	GhTUB\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:59
L2	582	GH-1 OR GH1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:00
L3	1145	beta-tubulin or (beta adj2 tubulin) or "beta-tubulin" or ("beta" adj2 tubulin)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:00
L4	6	2 AND 3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:01
L5	1344	DANG-\$ IN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:01
L6	941	HEINEN-\$ IN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:01
L7	19864	ALLEN-\$ IN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:02
L8	0	5 AND 6 AND 7	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:02
L9	22149	5 OR 6 OR 7	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:02
L10	0	2 AND 9	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:02
L11	153633	COTTON OR GOSSYPIUM OR HIRSUTUM	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:03
L12	5310	fiber-specific or (fiber adj2 specific)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:03

L13	7	9 AND 12	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:03
L14	5	11 AND 13	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:05
L15	0	3 AND 13	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:05
L16	0	2 AND 13	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:05
L17	2	"5792933".PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:06
L18	0	17 AND 3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 19:06

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4720	cai-\$\$.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:12
L2	4096	li-x\$.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:12
L3	141	cheng-n\$.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:12
L4	5647	liu-j\$.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:12
L5	5	1 and 2 and 3 and 4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:14
L6	14520	1 or 2 or 3 or 4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:13
L7	1145	beta-tubulin or (beta adj2 tubulin) or ".beta-tubulin" or ("beta" adj2 tubulin)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:16
L8	1	cftub\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:15
L9	270	7 with (gene or promoter\$1 or upstream or untranslat\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:18
L10	1	9 and 6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:17
L11	49	9 and cotton	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:17
L12	3	9 same cotton	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:18

L13	5310	fiber-specific or (fiber adj2 specific)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:18
L14	92	13 with (gene or promoter\$1 or upstream or untranslat\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:19
L15	2	14 and 6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:19
L16	3	7 and 14	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:20
L17	77	14 and cotton	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:20
L18	2	7 and 17	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:20
L19	2	tubulin and 17	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/21 18:20

(FILE 'HOME' ENTERED AT 18:22:16 ON 21 APR 2005)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 18:22:34 ON 21 APR 2005

L1 39701 S (CAI, ?)/IN,AU
L2 485898 S (LI, ?)/IN,AU
L3 111183 S (CHENG, ?)/IN,AU
L4 399474 S (LIU, ?)/IN,AU
L5 959477 S L1 OR L2 OR L3 OR L4
L6 64 S L1 AND L2 AND L3 AND L4
L7 155854 S COTTON
L8 6 S L6 AND L7
L9 4 DUPLICATE REMOVE L8 (2 DUPLICATES REMOVED)
L10 12689 S .BETA-TUBULIN OR (.BETA (2W) TUBULIN) OR BETA-TUBULIN OR (BET
L11 270 S L10 AND L5
L12 10 S L11 AND COTTON
L13 4 DUPLICATE REMOVE L12 (6 DUPLICATES REMOVED)
L14 2 S L13 NOT L8
L15 3474 S (GENE OR GENES OR PROMOTER? OR ENHANCER? OR UNTRANSLATED OR R
L16 6973 S (GENE OR GENES OR PROMOTER? OR ENHANCER? OR UNTRANSLATED OR R
L17 27 S L16 AND COTTON
L18 20 S L17 NOT (L8 OR L12)
L19 14 DUPLICATE REMOVE L18 (6 DUPLICATES REMOVED)
L20 7 S GHTUB1
L21 3 DUPLICATE REMOVE L20 (4 DUPLICATES REMOVED)
L22 2 S CFTUB?
L23 2 DUPLICATE REMOVE L22 (0 DUPLICATES REMOVED)

=>

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(ROSPATENT) added to list of core patent offices covered
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NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
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MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

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FILE 'HOME' ENTERED AT 18:22:16 ON 21 APR 2005

=> FILE MEDLINE EMBASE BIOSIS CAPLUS

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

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FILE 'EMBASE' ENTERED AT 18:22:34 ON 21 APR 2005
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=> S (CAI, ?)/IN,AU
'IN' IS NOT A VALID FIELD CODE
'IN' IS NOT A VALID FIELD CODE
L1 39701 (CAI, ?)/IN,AU

=> S (LI, ?)/IN,AU
'IN' IS NOT A VALID FIELD CODE
'IN' IS NOT A VALID FIELD CODE
L2 485898 (LI, ?)/IN,AU

=> S (CHENG, ?)/IN,AU
'IN' IS NOT A VALID FIELD CODE
'IN' IS NOT A VALID FIELD CODE
L3 111183 (CHENG, ?)/IN,AU

=> S (LIU, ?)/IN,AU
'IN' IS NOT A VALID FIELD CODE
'IN' IS NOT A VALID FIELD CODE
L4 399474 (LIU, ?)/IN,AU

=> S L1 OR L2 OR L3 OR L4
L5 959477 L1 OR L2 OR L3 OR L4

=> S L1 AND L2 AND L3 AND L4
L6 64 L1 AND L2 AND L3 AND L4

=> S COTTON
L7 155854 COTTON

=> S L6 AND L7
L8 6 L6 AND L7

=> DUPLICATE REMOVE L8
DUPLICATE PREFERENCE IS 'MEDLINE, BIOSIS, CAPLUS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):N
PROCESSING COMPLETED FOR L8
L9 4 DUPLICATE REMOVE L8 (2 DUPLICATES REMOVED)

=> D IBIB AB L9 1,2,3,4

L9 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:555671 CAPLUS
DOCUMENT NUMBER: 137:104823
TITLE: Isolation and characterization of an anther-specific
promoter (CoFS) in cotton
INVENTOR(S): Liu, Jian-Wei; Li, Xuebao;
Cai, Lin; Cheng, Ninghui
PATENT ASSIGNEE(S): Institute of Molecular Agrobiolgy, Singapore
SOURCE: PCT Int. Appl., 31 pp.

DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

CODEN: PIXXD2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002057470	A1	20020725	WO 2001-SG22	20010117
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1354058	A1	20031022	EP 2001-908584	20010117
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004158892	A1	20040812	US 2004-466521	20040217
PRIORITY APPLN. INFO.:			WO 2001-SG22	W 20010117

AB The present invention relates to an anther-specific **cotton** gene (CoFS), and active promoter fragments thereof. These promoters show strong anther-specific activity.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STM

ACCESSION NUMBER: 2002:107567 CAPLUS

DOCUMENT NUMBER: 136:146228

TITLE: Isolation and characterization of a fiber-specific actin promoter from **cotton** gene CFACT1

INVENTOR(S): Li, Xuebao; Cai, Lin; Cheng, Ninghui; Liu, Jian-Wei

PATENT ASSIGNEE(S): Institute of Molecular Agrobiolgy, Singapore

SOURCE: PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002010413	A1	20020207	WO 2000-SG112	20000801
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1226259	A1	20020731	EP 2000-955223	20000801
EP 1226259	B1	20041020		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
TR 200200850	T1	20021021	TR 2002-200200850	20000801
TR 200200852	T1	20030623	TR 2002-200200852	20000801
AT 280237	E	20041115	AT 2000-955223	20000801

PRIORITY APPLN. INFO.: WO 2000-SG112 W 20000801
 AB The present invention relates to the **cotton** actin gene CFACT1, and the fiber-specific promoter thereof. These promoters used to control the reporter gene (GUS) expression show strong fiber-specific activity in transgenic tobacco and **cotton**.
 REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2002:107536 CAPLUS
 DOCUMENT NUMBER: 136:146217
 TITLE: Isolation and characterization of a fiber-specific β -tubulin promoter from **cotton**
 INVENTOR(S): Cai, Lin; Li, Xuebao; Cheng, Ninghui; Liu, Jian-Wei
 PATENT ASSIGNEE(S): Institute of Molecular Agrobiolgy, Singapore
 SOURCE: PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002010377	A1	20020207	WO 2000-SG111	20000801
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1222263	A1	20020717	EP 2000-955222	20000801
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				

PRIORITY APPLN. INFO.: WO 2000-SG111 W 20000801
 AB The present invention relates to a **cotton** β -tubulin gene CFTUB2, and active fragments thereof. The two CFTUB2 promoter fragments (1.3 and 0.9 kb) were fused with the GUS gene to construct gene expression vectors for analyzing the function of the promoter. In all the transgenic **cotton** plants studied, GUS activity was detected only in young fibers, but not in the flower organs such as anthers, petals and sepals, or in leaves and roots. These promoters show strong fiber-specific activity. He isolated promoter may be used in improving **cotton** fibers to create new **cotton** varieties with high fiber quality and yield by gene manipulation.
 REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 4 MEDLINE on STN DUPLICATE 1
 ACCESSION NUMBER: 2002619537 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 12376634
 TITLE: Molecular characterization of the **cotton** GhtUB1 gene that is preferentially expressed in fiber.
 AUTHOR: Li Xue-Bao; Cai Lin; Cheng Ning-Hui; Liu Jian-Wei
 CORPORATE SOURCE: Temasek Life Sciences Laboratory, 1 Research Link, National University of Singapore, Singapore 117604.. xbli@tll.org.sg
 SOURCE: Plant physiology, (2002 Oct) 130 (2) 666-74.
 Journal code: 0401224. ISSN: 0032-0889.

PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 OTHER SOURCE: GENBANK-AF484959; GENBANK-AF487511
 ENTRY MONTH: 200302
 ENTRY DATE: Entered STN: 20021012
 Last Updated on STN: 20030207
 Entered Medline: 20030206

AB Each fiber of **cotton** (*Gossypium hirsutum*) is a single epidermal cell that rapidly elongates to 2.5 to 3.0 cm from the ovule surface within about 16 d after anthesis. A large number of genes are required for fiber differentiation and development, but so far, little is known about how these genes control and regulate the process of fiber development. To investigate gene expression patterns in fiber, a cDNA, GhTUB1, encoding beta-tubulin was isolated from a **cotton** fiber cDNA library. The analyses of RNA northern-blot hybridization and reverse transcriptase-polymerase chain reaction demonstrated that GhTUB1 transcripts preferentially accumulated at high levels in fiber, at low levels in ovules at the early stage of **cotton** boll development, and at very low levels in other tissues of **cotton**. The corresponding GhTUB1 gene including the promoter region was isolated by screening a **cotton** genomic DNA library. To demonstrate the specificity of the GhTUB1 promoter, the 5'-flanking region including the promoter and 5'-untranslated region was fused with the beta-glucuronidase reporter gene. The expression of the reporter chimera was examined in a large number of transgenic **cotton** plants. Histochemical assays demonstrated that GhTUB1::beta-glucuronidase fusion genes were expressed preferentially at high levels in fiber and primary root tip of 1- to 3-d-old seedlings and at low levels in other tissues such as ovule, pollen, seedling cotyledon, and root basal portion. The results suggested that the GhTUB1 gene may play a distinct and required role in fiber development. In addition, the GhTUB1 promoter may have great potential for **cotton** improvement by genetic engineering.

=> D HIS

(FILE 'HOME' ENTERED AT 18:22:16 ON 21 APR 2005)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 18:22:34 ON 21 APR 2005

L1 39701 S (CAI, ?)/IN,AU
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 L5 959477 S L1 OR L2 OR L3 OR L4
 L6 64 S L1 AND L2 AND L3 AND L4
 L7 155854 S COTTON
 L8 6 S L6 AND L7
 L9 4 DUPLICATE REMOVE L8 (2 DUPLICATES REMOVED)

=> S .BETA-TUBULIN OR (.BETA (2W) TUBULIN) OR BETA-TUBULIN OR (BETA (2W) TUBULIN)
 L10 12689 .BETA-TUBULIN OR (.BETA (2W) TUBULIN) OR BETA-TUBULIN OR (BETA (2W) TUBULIN)

=> S L10 AND L5
 L11 270 L10 AND L5

=> S L11 AND COTTON
 L12 10 L11 AND COTTON

=> DUPLICATE REMOVE L12
 DUPLICATE PREFERENCE IS 'MEDLINE, EMBASE, BIOSIS, CAPLUS'

KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):N

PROCESSING COMPLETED FOR L12

L13 4 DUPLICATE REMOVE L12 (6 DUPLICATES REMOVED)

=> S L13 NOT L8

L14 2 L13 NOT L8

=> D IBIB AB L14 1,2

L14 ANSWER 1 OF 2 MEDLINE on STN

ACCESSION NUMBER: 2002452918 MEDLINE

DOCUMENT NUMBER: PubMed ID: 12207907

TITLE: A **beta-tubulin**-like cDNA expressed specifically in elongating **cotton** fibers induces longitudinal growth of fission yeast.

AUTHOR: Ji Shengjian; Lu Yingchun; **Li Jun**; Wei Gang; Liang Xiujian; Zhu Yuxian

CORPORATE SOURCE: State Key Laboratory of Protein Engineering and Plant Genetic Engineering, College of Life Sciences, Peking University, 100871, Beijing, China.

SOURCE: Biochemical and biophysical research communications, (2002 Sep 6) 296 (5) 1245-50.

Journal code: 0372516. ISSN: 0006-291X.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

OTHER SOURCE: GENBANK-AF521240

ENTRY MONTH: 200210

ENTRY DATE: Entered STN: 20020906

Last Updated on STN: 20021026

Entered Medline: 20021024

AB Using cDNA Representational Difference Analysis (RDA) techniques, we isolated a cDNA that was expressed specifically in **cotton** fibers but not in the ovules of a fuzzless-lintless mutant (fl). We designated it as Gh-BTubL for it shares high sequence identity with known plant and yeast beta-tubulins. RT-PCR and robotic cDNA dot blot analyses indicated that the expression of Gh-BTubL was correlated with the elongation pattern of **cotton** fibers. In situ hybridization results verified that there was no Gh-BTubL mRNA in fl ovules while it was easily detected in the elongating wild type **cotton** fiber cells. Overexpression of Gh-BTubL in fission yeast induced longitudinal growth of the host cells by 1.74-fold, with no apparent effect on other aspects of the host cells. We suggest that Gh-BTubL plays an important role in **cotton** fiber elongation and we believe that elucidation of the control mechanisms for expression of tubulin-like proteins may help improve fiber quality and productivity.

L14 ANSWER 2 OF 2 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:492467 BIOSIS

DOCUMENT NUMBER: PREV200300494797

TITLE: Specific expression of a **beta-tubulin** gene (GhTub1) in developing **cotton** fibers.

AUTHOR(S): **Li Yuanli**; Sun Jie; **Li Chunhong**; Zhu Yongqing; Xia Guixian [Reprint Author]

CORPORATE SOURCE: Institute of Microbiology, Chinese Academy of Sciences, Beijing, 100080, China
guixianx@yahoo.com

SOURCE: Science in China Series C Life Sciences, (June 2003) Vol. 46, No. 3, pp. 235-242. print.

ISSN: 1006-9305.

DOCUMENT TYPE: Article

LANGUAGE: English

OTHER SOURCE: DDBJ-AF484959; EMBL-AF484959; GenBank-AF484959;
DDBJ-AI726205; EMBL-AI726205; GenBank-AI726205;
DDBJ-AI729760; EMBL-AI729760; GenBank-AI729760;
DDBJ-AI730874; EMBL-AI730874; GenBank-AI730874

ENTRY DATE: Entered STN: 22 Oct 2003
Last Updated on STN: 22 Oct 2003

AB A cDNA library was constructed using poly (A)+ RNA isolated from -1-15 DPA fibers of upland **cotton** (*Gossypium hirsutum*). The cDNA encoding a **beta-tubulin** isoform (designated as GhTub1) was identified through EST search. Northern blot analysis using 3'-UTR of the cDNA as a gene-specific probe was performed to investigate the expression levels of GhTub1 in various organs and in the developing fibers. The results showed that GhTub1 gene was specifically expressed in **cotton** fiber cells. During fiber development, GhTub1 transcripts accumulated highly at the stage of cell rapid elongation with the highest expression appearing at the time when fiber expansion reaches the peak rate. To probe the in vivo function of GhTub1, its cDNA was cloned in the yeast expression vector pREP1 and transformed into the fission yeast *Schizosaccharomyces pombe*. Overexpression of GhTub1 in yeast cells caused severe changes in the cell morphology. These results suggest that GhTub1 may play a role in the polar elongation of **cotton** fibers. To our knowledge, this is the first report on the fiber-specific transcript accumulation of a **cotton beta-tubulin** gene.

=> D HIS

(FILE 'HOME' ENTERED AT 18:22:16 ON 21 APR 2005)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 18:22:34 ON 21 APR 2005

L1 39701 S (CAI, ?)/IN,AU
L2 485898 S (LI, ?)/IN,AU
L3 111183 S (CHENG, ?)/IN,AU
L4 399474 S (LIU, ?)/IN,AU
L5 959477 S L1 OR L2 OR L3 OR L4
L6 64 S L1 AND L2 AND L3 AND L4
L7 155854 S COTTON
L8 6 S L6 AND L7
L9 4 DUPLICATE REMOVE L8 (2 DUPLICATES REMOVED)
L10 12689 S .BETA-TUBULIN OR (.BETA (2W) TUBULIN) OR BETA-TUBULIN OR (BET
L11 270 S L10 AND L5
L12 10 S L11 AND COTTON
L13 4 DUPLICATE REMOVE L12 (6 DUPLICATES REMOVED)
L14 2 S L13 NOT L8

=> S (GENE OR GENES OR PROMOTER? OR ENHANCER? OR UNTRANSLATED OR REGULATORY) (S) L10
L15 3474 (GENE OR GENES OR PROMOTER? OR ENHANCER? OR UNTRANSLATED OR
REGULATORY) (S) L10

=> S (GENE OR GENES OR PROMOTER? OR ENHANCER? OR UNTRANSLATED OR REGULATORY) (S)
(TUBULIN OR L10)

L16 6973 (GENE OR GENES OR PROMOTER? OR ENHANCER? OR UNTRANSLATED OR
REGULATORY) (S) (TUBULIN OR L10)

=> S L16 AND COTTON
L17 27 L16 AND COTTON

=> S L17 NOT (L8 OR L12)
L18 20 L17 NOT (L8 OR L12)

=> DUPLICATE REMOVE L18
DUPLICATE PREFERENCE IS 'MEDLINE, BIOSIS, CAPLUS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):N

PROCESSING COMPLETED FOR L18

L19 14 DUPLICATE REMOVE L18 (6 DUPLICATES REMOVED)

=> D TI L19 1-14

L19 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

TI Methods for regulating expression of endo-1,3- β -glucanase and uridine diphosphoglucose-1,3- β -glucan glucosyltransferase genes in altering fiber development and quality in transgenic **cotton** plants

L19 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

TI Regulating expression of endo-1,3- β -glucanase and uridine diphosphoglucose-1,3- β -glucan glucosyltransferase genes for altering fiber development and quality in transgenic **cotton** plants

L19 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

TI Characterization of California isolates of *Fusarium oxysporum* f. sp. *vasinfectum*

L19 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

TI Analysis of genes expression during **cotton** fiber development by cDNA microarray

L19 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

TI Characterization of California isolates of *Fusarium oxysporum* f. sp. *vasinfectum*

L19 ANSWER 6 OF 14 MEDLINE on STN

DUPLICATE 1

TI Plant molecular biology and biotechnology research in the post-recombinant DNA era.

L19 ANSWER 7 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI Characterization of California isolates of *Fusarium oxysporum* f. sp. *vasinfectum* from **cotton**.

L19 ANSWER 8 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

DUPLICATE 2

TI Isolation of genes preferentially expressed in **cotton** fibers by cDNA filter arrays and RT-PCR.

L19 ANSWER 9 OF 14 MEDLINE on STN

DUPLICATE 3

TI **Gene**-specific changes in alpha-**tubulin** transcript accumulation in developing **cotton** fibers.

L19 ANSWER 10 OF 14 MEDLINE on STN

DUPLICATE 4

TI Genes involved in osmoregulation during turgor-driven cell expansion of developing **cotton** fibers are differentially regulated.

L19 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

TI Cryptic speciation and recombination in the aflatoxin-producing fungus *Aspergillus flavus*

L19 ANSWER 12 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI Regulation of genes involved in cell elongation during **cotton** (*Gossypium hirsutum*) fiber development.

L19 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

TI The **promoter** elements of α - **tubulin genes** and their use in the expression of foreign **genes** in transgenic plants

L19 ANSWER 14 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on

STN
TI Molecular characterization of the **beta-tubulin**
gene family in herbicide-resistant and -susceptible goosegrass
(*Eleusine indica* (L.) Gaertn.).

=> D IBIB AB L19 1-14

L19 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:158806 CAPLUS
DOCUMENT NUMBER: 142:257922
TITLE: Methods for regulating expression of
endo-1,3- β -glucanase and uridine
diphosphoglucose-1,3- β -glucan glucosyltransferase
genes in altering fiber development and quality in
transgenic **cotton** plants
INVENTOR(S): Ruan, Yong Ling; Furbank, Robert T.
PATENT ASSIGNEE(S): Commonwealth Scientific and Industrial Research
Organisation Csiro, Australia
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005017157	A1	20050224	WO 2004-AU1076	20040811
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: US 2003-495123P P 20030815

AB Methods and means are provided for regulating expression of
endo-1,3- β -glucanase and uridine diphosphoglucose-1,3- β -glucan
glucosyltransferase genes in altering fiber development and quality in
transgenic **cotton** plants. Fiber length may be modulated by
altering the fiber elongation phase. The fiber elongation phase may be
increased or decreased by interfering with callose deposition in
plasmodesmata at the base of the fiber cells.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:160907 CAPLUS
DOCUMENT NUMBER: 142:257924
TITLE: Regulating expression of endo-1,3- β -glucanase and
uridine diphosphoglucose-1,3- β -glucan
glucosyltransferase genes for altering fiber
development and quality in transgenic **cotton**
plants
INVENTOR(S): Ruan, Yong Ling; Furbank, Robert T.
PATENT ASSIGNEE(S): Australia
SOURCE: U.S. Pat. Appl. Publ., 18 pp.
CODEN: USXXCO

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005044590	A1	20050224	US 2004-915405	20040811
PRIORITY APPLN. INFO.:			US 2003-495123P	P 20030815

AB The present invention provides methods and use of antisense oligonucleotides for inhibiting uridine diphosphoglucose-1,3- β -glucan glucosyltransferase and increasing expression of endo-1,3- β -glucanase genes for alteration of fiber development and quality in transgenic **cotton** plants. Transgenic **cotton** fibers have improved drought tolerance as well. Methods and means are provided for modulating fiber length by altering the fiber elongation phase. The fiber elongation phase may be increased or decreased by interfering with callose deposition in plasmodesmata at the base of the fiber cells.

L19 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:312248 CAPLUS
TITLE: Characterization of California isolates of *Fusarium oxysporum* f. sp. *vasinfectum*
AUTHOR(S): Kim, Y.; Hutmacher, R. B.; Davis, R. M.
CORPORATE SOURCE: Department of Plant Pathology, University of California, Davis, 95616, USA
SOURCE: Plant Disease (2005), 89(4), 366-372
CODEN: PLDIDE; ISSN: 0191-2917
PUBLISHER: American Phytopathological Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Thirty isolates of *Fusarium oxysporum* f. sp. *vasinfectum* from California, Australia, China, and the American Type Culture Collection were characterized by partial sequences of translational elongation factor (EF-1 α), phosphate permase (PHO), and **beta-tubulin** (BT) **genes**, restriction digests of the intergenic spacer (IGS) region of nuclear rDNA, and pathogenicity tests. Based on phylogenetic anal. of combined sequences of EF-1 α , PHO, and BT genes, California isolates represented four lineages. Lineage I contained race 3, lineage II contained races 1, 2, and 6, lineage III contained race 8, and lineage IV contained race 4. The Australian isolates formed a strongly supported independent clade. There were nine haplotypes based on restriction digests of the IGS region. In greenhouse pathogenicity tests with California isolates, those from the race 4 lineage were highly aggressive on certain Pima **cotton** (*Gossypium barbadense*) cultivars and less aggressive on Upland **cotton** (*Gossypium hirsutum*) cultivars. All isolates belonging to the other lineages caused relatively mild symptoms on both Pima and Upland cultivars. This is the first report of the occurrence of races 3, 4, and 8 in California.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:684629 CAPLUS
DOCUMENT NUMBER: 141:308552
TITLE: Analysis of genes expression during **cotton** fiber development by cDNA microarray
AUTHOR(S): Xu, Yu; Shi, Yonghui; Feng, Jianxun; Zhu, Yuxian
CORPORATE SOURCE: National Laboratory of Protein Engineering and Plant Genetic Engineering, Peking University, Beijing, 100871, Peop. Rep. China
SOURCE: Fenzi Zhiwu Yuzhong (2004), 2(3), 348-353
CODEN: FZYEO; ISSN: 1672-416X

PUBLISHER: Fenzi Zhiwu Yuzhong Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB To study **cotton** fiber development-associated **gene** expression, we prepared a cDNA microarray containing 63 cDNAs, including E6, LTP, PRP, Expansin, **Tubulin** and Annexin, and used total RNAs extracted from 10DPA (days post anthesis) **cotton** fiber as well as from 10DPA ovule of fuzz-less and lint-less mutant. Differential expression of E6, LTP, PRP and Expansin gene families, especially that of E6 and LTP gene families, were observed from 10DPA **cotton** fiber and 10DPA mutant. Our analyses are in accordance with previous results. The current work confirms the reliability of using cDNA microarray to detect **cotton** fiber development-associated genes.

L19 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:833231 CAPLUS
DOCUMENT NUMBER: 142:35044
TITLE: Characterization of California isolates of *Fusarium oxysporum* f. sp. *vasinfectum*
AUTHOR(S): Davis, R. M.; Kim, Y.; DeVay, J. E.; Smith, S. N.; Hutmacher, R. B.
CORPORATE SOURCE: Dept. of Plant Pathology, University of California, Davis, Davis, CA, USA
SOURCE: Proceedings - Beltwide Cotton Conferences (2003) 191-196
CODEN: PCOCEN; ISSN: 1059-2644
PUBLISHER: National Cotton Council
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English

AB Because there is concern over the introduction of highly virulent Australian strains of *Fusarium oxysporum* f. sp. *vasinfectum* (FOV) into California, it is necessary to characterize local strains of the fungus to document the movement of genotypes in and out of important **cotton**-producing areas. Regulatory decisions may rely on such data regarding movement of plant material between states or countries where different strains exist. To accurately describe the strains that presently occur in California, various genetic methods were employed. Based on partial sequences of translation elongation factor and **beta-tubulin genes** and restriction enzyme digestion of the IGS nuclear r-DNA, Australian isolates of FOV do not exist in California. Californian isolates fell into four lineages. One group of several isolates consisted of the lineage of races 1 and 2, which are closely related to each other; a second group was represented by two isolates that may or may not belong to the race 3 lineage; a third group, race 4, was commonly collected in California; and a fourth group, race 8, was represented by two isolates. Race 4 was highly virulent on Pima in greenhouse pathogenicity tests and was considerably less virulent on Acala; isolates belonging to the lineage of races 1, 2, and 6 were relatively virulent on Acala **cotton** but not Pima. Race 8 and race 3(?) were weakly pathogenic on both Acala (Maxxa and Phy-72) and Pima (DP-744 and Pima S-7).

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 6 OF 14 MEDLINE on STN

DUPLICATE 1

ACCESSION NUMBER: 2003397094 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12934934
TITLE: Plant molecular biology and biotechnology research in the post-recombinant DNA era.
AUTHOR: Tyagi Akhilesh K; Khurana Jitendra P
CORPORATE SOURCE: Department of Plant Molecular Biology, University of Delhi South Campus, New Delhi 110021, India..

SOURCE: akhilesh@genomeindia.org
 Advances in biochemical engineering/biotechnology, (2003)
 84 91-121. Ref: 220
 Journal code: 8307733. ISSN: 0724-6145.
 PUB. COUNTRY: Germany: Germany, Federal Republic of
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200309
 ENTRY DATE: Entered STN: 20030826
 Last Updated on STN: 20030928
 Entered Medline: 20030926

AB After the beginning of the recombinant DNA era in the mid-1970s, researchers in India started to make use of the new technology to understand the structure of plant genes and regulation of their expression. The outcome started to appear in print in early the 1980s and **genes** for histones, **tubulin**, photosynthetic membrane proteins, phototransduction components, organelles and those regulated differentially by developmental and extrinsic signals were sequenced and characterized. Some genes of biotechnological importance like those encoding an interesting seed protein and the enzyme glyoxalase were also isolated. While work on the characterization of genome structure and organization was started quite early, it remained largely focused on the identification of DNA markers and genetic variability. In this context, the work on mustard, rice and wheat is worth mentioning. In the year 2000, India became a member of the international consortium to sequence entire rice genome. Several laboratories have also given attention to regulated expression of plastid and nuclear genes as well as to isolate target-specific promoters or design promoters with improved potential. Simultaneously, transgenic systems for crops like mustard, rice, wheat, **cotton**, legumes and several vegetables have been established. More recently, genes of agronomic importance like those for insect resistance, abiotic stress tolerance, nutritional improvement and male sterility, isolated in India or abroad, have been utilized for raising transgenics for crop improvement. Some of these transgenics have already shown their potential in containment facility or limited field trials conducted under the stipulated guidelines. Plant molecular biology and biotechnology are thus clearly poised to make an impact on research in basic biology and agriculture in the near future.

L19 ANSWER 7 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
 ACCESSION NUMBER: 2003:371726 BIOSIS
 DOCUMENT NUMBER: PREV200300371726
 TITLE: Characterization of California isolates of *Fusarium oxysporum* f. sp. *vasinfectum* from **cotton**.
 AUTHOR(S): Kim, Y. [Reprint Author]; Davis, R. M.. [Reprint Author]
 CORPORATE SOURCE: Dept. of Plant Pathology, University of California, Davis, CA, 95616, USA
 SOURCE: Phytopathology, (June 2003) Vol. 93, No. 6 Supplement, pp. S45. print.
 Meeting Info.: Annual Meeting of the American Phytopathological Society. Charlotte, North Carolina, USA. August 09-13, 2003. American Phytopathological Society. ISSN: 0031-949X (ISSN print).
 DOCUMENT TYPE: Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LANGUAGE: English
 ENTRY DATE: Entered STN: 13 Aug 2003
 Last Updated on STN: 13 Aug 2003
 AB Because of concern over the introduction of highly virulent Australian strains of *Fusarium oxysporum* f. sp. *vasinfectum* (FOV) into California, it

was necessary to characterize local strains to document the movement of genotypes into U.S. **cotton**-producing areas. To accurately describe the strains that presently occur in California, various genetic methods were employed. Based on partial sequences of translation elongation factor, phosphatase permease, and **beta-tubulin genes** and restriction enzyme digestion of the IGS nuclear r-DNA, Australian isolates of FOV do not exist in California. Californian isolates fell into four lineages. One group of several isolates consisted of races 1 and 2; a second group was represented by two isolates of race 3; a third group, race 4, was common; and a fourth group, race 8, was represented by two isolates. Race 4 was highly virulent on Pima in greenhouse pathogenicity tests and was considerably less virulent on Acala **cotton**; isolates belonging to the lineage of races 1 and 2 were relatively virulent on Acala but not Pima. Races 3 and 8 were weakly virulent on both Acala and Pima **cotton**.

L19 ANSWER 8 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
DUPLICATE 2

ACCESSION NUMBER: 2003:58182 BIOSIS
DOCUMENT NUMBER: PREV200300058182
TITLE: Isolation of genes preferentially expressed in **cotton** fibers by cDNA filter arrays and RT-PCR.
AUTHOR(S): Li, Chun-Hong; Zhu, Yong-Qing; Meng, Yu-Ling; Wang, Jia-Wei; Xu, Ke-Xiang; Zhang, Tian-Zhen; Chen, Xiao-Ya [Reprint Author]
CORPORATE SOURCE: State Key Laboratory of Plant Molecular Genetics, Institute of Plant Physiology and Ecology, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, 300 Fenglin Road, Shanghai, 200032, China
xychen@iris.sipp.ac.cn
SOURCE: Plant Science (Oxford), (December 2002) Vol. 163, No. 6, pp. 1113-1120. print.
ISSN: 0168-9452 (ISSN print).
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 22 Jan 2003
Last Updated on STN: 22 Jan 2003

AB **Cotton** fibers are single-cell trichomes derived from the outer integument cells of ovules. Recent studies showed that the rapid elongation of fibers was coordinated with the expression of a subset of fiber-specific genes. Here we report the use of filter arrays of cDNAs to identify genes preferentially expressed in **cotton** fibers. An array of 1536 clones was hybridized with cDNA probes prepared from wild type (fiber-containing) and fl mutant (naked) ovules at 5 days post-anthesis (DPA), respectively. Subsequent RT-PCR analyses of 14 genes identified ten that were highly transcribed in **cotton** fibers. Among them, an RD22-like protein (GhRDL), a putative acyltransferase (GhACY), a Fiddlehead homolog (GhFDH), a serine carboxypeptidase-like protein (GhSCP), two **tubulin** components (GhTUA6 and GhTUB1) and the previously reported **gene** encoding fiber protein E6, showed a fiber-enriched expression pattern. The other three genes, including an actin (GhACT), a putative cellulose synthase catalytic subunit (GhCesA-5) and a putative 24-sterol-C-methyltransferase (GhSMT), were actively transcribed in fibers during the elongation stage, but their transcripts were also clearly present in other tissues. The possible roles of these proteins in **cotton** fiber development and growth are discussed.

L19 ANSWER 9 OF 14 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 1999412459 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10482673
TITLE: **Gene-specific changes in alpha-tubulin** transcript accumulation in developing **cotton** fibers.

AUTHOR: Whittaker D J; Triplett B A
 CORPORATE SOURCE: Cotton Fiber Bioscience, United States Department of
 Agriculture-Agricultural Research Service, Southern
 Regional Research Center, 1100 Robert E. Lee Boulevard, New
 Orleans, Louisiana 70124, USA.
 SOURCE: Plant physiology, (1999 Sep) 121 (1) 181-8.
 Journal code: 0401224. ISSN: 0032-0889.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals; Space Life Sciences
 OTHER SOURCE: GENBANK-AF106567; GENBANK-AF106568; GENBANK-AF106569;
 GENBANK-AF106570; GENBANK-AF106571
 ENTRY MONTH: 199910
 ENTRY DATE: Entered STN: 20000111
 Last Updated on STN: 20020321
 Entered Medline: 19991028

AB The fibers of **cotton** (*Gossypium hirsutum*) are single-cell
 trichomes that undergo rapid and synchronous elongation. Cortical
 microtubules provide spatial information necessary for the alignment of
 cellulose microfibrils that confine and regulate cell elongation. We used
gene-specific probes to investigate **alpha-tubulin**
 transcript levels in elongating **cotton** fibers. Two discrete
 patterns of transcript accumulation were observed. Whereas transcripts of
alpha-tubulin genes GhTua2/3 and GhTua4 increased in
 abundance from 10 to 20 d post anthesis (DPA), GhTua1 and GhTua5
 transcripts were abundant only through to 14 DPA, and dropped
 significantly at 16 DPA with the onset of secondary wall synthesis. This
 is the first report, to our knowledge, of **gene-specific** changes
 in **tubulin** transcript levels during the development of a
 terminally differentiated plant cell. The decrease in abundance of GhTua1
 and GhTua5 transcripts was correlated with pronounced changes in cell wall
 structure, suggesting that alpha-tubulin isoforms may be functionally
 distinct in elongating fiber cells. Although total alpha-tubulin
 transcript levels were much higher in fiber than several other tissues,
 including the hypocotyl and pollen, none of the alpha-tubulins was
 specific to fiber cells.

L19 ANSWER 10 OF 14 MEDLINE on STN DUPLICATE 4
 ACCESSION NUMBER: 1998205094 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 9536073
 TITLE: Genes involved in osmoregulation during turgor-driven cell
 expansion of developing **cotton** fibers are
 differentially regulated.
 AUTHOR: Smart L B; Vojdani F; Maeshima M; Wilkins T A
 CORPORATE SOURCE: Department of Vegetable Crops, University of California,
 Davis 95616, USA.
 SOURCE: Plant physiology, (1998 Apr) 116 (4) 1539-49.
 Journal code: 0401224. ISSN: 0032-0889.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199805
 ENTRY DATE: Entered STN: 19980529
 Last Updated on STN: 19980529
 Entered Medline: 19980518

AB **Cotton** (*Gossypium hirsutum* L.) fibers are single-celled
 trichomes that synchronously undergo a phase of rapid cell expansion, then
 a phase including secondary cell wall deposition, and finally maturation.
 To determine if there is coordinated regulation of gene expression during
 fiber expansion, we analyzed the expression of components involved in
 turgor regulation and a cytoskeletal protein by measuring levels of mRNA

and protein accumulation and enzyme activity. Fragments of the **genes** for the plasma membrane proton-translocating ATPase, vacuole-ATPase, proton-translocating pyrophosphatase (PPase), phosphoenolpyruvate carboxylase, major intrinsic protein, and **alpha-tubulin** were amplified by polymerase chain reaction and used as probes in ribonuclease protection assays of RNA from a fiber developmental series, revealing two discrete patterns of mRNA accumulation. Transcripts of all but the PPase accumulated to highest levels during the period of peak expansion (+12-15 d postanthesis [dpa]), then declined with the onset of secondary cell wall synthesis. The PPase was constitutively expressed through fiber development. Activity of the two proton-translocating-ATPases peaked at +15 dpa, whereas PPase activity peaked at +20 dpa, suggesting that all are involved in the process of cell expansion but with varying roles. Patterns of protein accumulation and enzyme activity for some of the proteins examined suggest posttranslational regulation through fiber development.

L19 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:33933 CAPLUS

DOCUMENT NUMBER: 128:178021

TITLE: Cryptic speciation and recombination in the aflatoxin-producing fungus *Aspergillus flavus*

AUTHOR(S): Geiser, David M.; Pitt, John I.; Taylor, John W.

CORPORATE SOURCE: Department of Plant and Microbial Biology, University of California, Berkeley, CA, 94720, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1998), 95(1), 388-393

CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

AB *Aspergillus flavus*, like approx. one-third of ascomycete fungi, is thought to be cosmopolitan and clonal because it has uniform asexual morphol. *A. flavus* produces aflatoxin on nuts, grains, and **cotton**, and assumptions about its life history are being used to develop strategies for its biol. control. We tested the assumptions of clonality and conspecificity in a sample of 31 Australian isolates by assaying restriction site polymorphisms from 11 protein encoding genes and DNA sequences from five of those genes. *A. flavus* isolates fell into two reproductively isolated clades (groups I and II). The lack of concordance among gene genealogies among isolates in one of the clades (group I) was consistent with a history of recombination. Our anal. included five strains of the closely related industrial fungus *A. oryzae*, all of which proved to be clonally related to group I.

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 12 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:358420 BIOSIS

DOCUMENT NUMBER: PREV199699080776

TITLE: Regulation of genes involved in cell elongation during **cotton** (*Gossypium hirsutum*) fiber development.

AUTHOR(S): Smart, Lawrence B. [Reprint author]; Vojdani, Fakrieh; Wan, Ching-Yi; Maeshima, Masayoshi; Wilkins, Thea A.

CORPORATE SOURCE: Dept. Vegetable Crops, Mann Lab., Univ. California, Davis, CA 95616, USA

SOURCE: Plant Physiology (Rockville), (1996) Vol. 111, No. 2 SUPPL., pp. 144.

Meeting Info.: Annual Meeting of the American Society of Plant Physiologists. San Antonio, Texas, USA. July 27-31, 1996.

CODEN: PLPHAY. ISSN: 0032-0889.

DOCUMENT TYPE: Conference; (Meeting)
 Conference; (Meeting Poster)
 LANGUAGE: English
 ENTRY DATE: Entered STN: 5 Aug 1996
 Last Updated on STN: 6 Aug 1996

L19 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:665128 CAPLUS
 DOCUMENT NUMBER: 123:49256
 TITLE: The **promoter** elements of α -**tubulin genes** and their use in the expression of foreign **genes** in transgenic plants

INVENTOR(S): Capellades, Montserrat; De Rose, Richard; Montoliu, Lluís; Puigdomenech, Pedro; Torres, Miguel Angel; Rigau, Juan; Uribe, Javier

PATENT ASSIGNEE(S): Rhone-Poulenc Agrochimie, Fr.

SOURCE: Eur. Pat. Appl., 25 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 652286	A1	19950510	EP 1994-420306	19941109
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
FR 2712302	A1	19950519	FR 1993-13684	19931110
FR 2712302	B1	19960105		
BR 9404562	A	19950620	BR 1994-4562	19941108
ZA 9408826	A	19950717	ZA 1994-8826	19941108
CA 2135461	AA	19950511	CA 1994-2135461	19941109
AU 9477751	A1	19950518	AU 1994-77751	19941109
AU 682539	B2	19971009		
HU 70464	A2	19951030	HU 1994-3216	19941109
US 5635618	A	19970603	US 1994-336778	19941109
JP 07184664	A2	19950725	JP 1994-276846	19941110
CN 1121958	A	19960508	CN 1994-118054	19941110
PRIORITY APPLN. INFO.:			FR 1993-13684	A 19931110

AB The **promoters** of plant α - **tubulin genes** are used to drive the expression of foreign **genes** in a tissue-specific manner in transgenic plants. Constructs using different fragments of the α - **tubulin promoters** of corn were tested for their ability to drive the expression of reporter **genes** in tobacco. Deletions had differing effects on the levels of GUS gene expression in roots vs. leaves in tobacco.

L19 ANSWER 14 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1993:447790 BIOSIS

DOCUMENT NUMBER: PREV199345083415

TITLE: Molecular characterization of the **beta-tubulin gene** family in herbicide-resistant and -susceptible goosegrass (*Eleusine indica* (L.) Gaertn.).

AUTHOR(S): Mysore, Kirankumar S.; Baird, W. V.

CORPORATE SOURCE: Dep. Hortic., Clemson Univ., Clemson, SC 29634-0375, USA

SOURCE: Hortscience, (1993) Vol. 28, No. 5, pp. 223.
 Meeting Info.: 90th Annual Meeting of the American Society for Horticultural Science. Nashville, Tennessee, USA. July 24-29, 1993.

CODEN: HJHSAR. ISSN: 0018-5345.

DOCUMENT TYPE: Conference; (Meeting)
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Sep 1993
Last Updated on STN: 28 Sep 1993

=> S GHTUB1
L20 7 GHTUB1

=> DUPLICATE REMOVE L20
DUPLICATE PREFERENCE IS 'MEDLINE, BIOSIS, CAPLUS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):N
PROCESSING COMPLETED FOR L20
L21 3 DUPLICATE REMOVE L20 (4 DUPLICATES REMOVED)

=> D IBIB AB L21 1,2,3

L21 ANSWER 1 OF 3 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
DUPLICATE 1

ACCESSION NUMBER: 2003:492467 BIOSIS
DOCUMENT NUMBER: PREV200300494797
TITLE: Specific expression of a beta-tubulin gene (**GhTub1**
) in developing cotton fibers.
AUTHOR(S): Li Yuanli; Sun Jie; Li Chunhong; Zhu Yongqing; Xia Guixian
[Reprint Author]
CORPORATE SOURCE: Institute of Microbiology, Chinese Academy of Sciences,
Beijing, 100080, China
guixianx@yahoo.com
SOURCE: Science in China Series C Life Sciences, (June 2003) Vol.
46, No. 3, pp. 235-242. print.
ISSN: 1006-9305.
DOCUMENT TYPE: Article
LANGUAGE: English
OTHER SOURCE: DDBJ-AF484959; EMBL-AF484959; GenBank-AF484959;
DDBJ-AI726205; EMBL-AI726205; GenBank-AI726205;
DDBJ-AI729760; EMBL-AI729760; GenBank-AI729760;
DDBJ-AI730874; EMBL-AI730874; GenBank-AI730874
ENTRY DATE: Entered STN: 22 Oct 2003
Last Updated on STN: 22 Oct 2003

AB A cDNA library was constructed using poly (A)+ RNA isolated from -1-15 DPA
fibers of upland cotton (*Gossypium hirsutum*). The cDNA encoding a
beta-tubulin isoform (designated as **GhTub1**) was identified
through EST search. Northern blot analysis using 3'-UTR of the cDNA as a
gene-specific probe was performed to investigate the expression levels of
GhTub1 in various organs and in the developing fibers. The
results showed that **GhTub1** gene was specifically expressed in
cotton fiber cells. During fiber development, **GhTub1**
transcripts accumulated highly at the stage of cell rapid elongation with
the highest expression appearing at the time when fiber expansion reaches
the peak rate. To probe the in vivo function of **GhTub1**, its
cDNA was cloned in the yeast expression vector pREP1 and transformed into
the fission yeast *Schizosaccharomyces pombe*. Overexpression of
GhTub1 in yeast cells caused severe changes in the cell
morphology. These results suggest that **GhTub1** may play a role
in the polar elongation of cotton fibers. To our knowledge, this is the
first report on the fiber-specific transcript accumulation of a cotton
beta-tubulin gene.

L21 ANSWER 2 OF 3 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
DUPLICATE 2

ACCESSION NUMBER: 2003:58182 BIOSIS
DOCUMENT NUMBER: PREV200300058182
TITLE: Isolation of genes preferentially expressed in cotton

fibers by cDNA filter arrays and RT-PCR.

AUTHOR(S): Li, Chun-Hong; Zhu, Yong-Qing; Meng, Yu-Ling; Wang, Jia-Wei; Xu, Ke-Xiang; Zhang, Tian-Zhen; Chen, Xiao-Ya [Reprint Author]

CORPORATE SOURCE: State Key Laboratory of Plant Molecular Genetics, Institute of Plant Physiology and Ecology, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, 300 Fenglin Road, Shanghai, 200032, China
xychen@iris.sipp.ac.cn

SOURCE: Plant Science (Oxford), (December 2002) Vol. 163, No. 6, pp. 1113-1120. print.
ISSN: 0168-9452 (ISSN print).

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 22 Jan 2003
Last Updated on STN: 22 Jan 2003

AB Cotton fibers are single-cell trichomes derived from the outer integument cells of ovules. Recent studies showed that the rapid elongation of fibers was coordinated with the expression of a subset of fiber-specific genes. Here we report the use of filter arrays of cDNAs to identify genes preferentially expressed in cotton fibers. An array of 1536 clones was hybridized with cDNA probes prepared from wild type (fiber-containing) and fl mutant (naked) ovules at 5 days post-anthesis (DPA), respectively. Subsequent RT-PCR analyses of 14 genes identified ten that were highly transcribed in cotton fibers. Among them, an RD22-like protein (GhRDL), a putative acyltransferase (GhACY), a Fiddlehead homolog (GhFDH), a serine carboxypeptidase-like protein (GhSCP), two tubulin components (GhTUA6 and **GhTUB1**) and the previously reported gene encoding fiber protein E6, showed a fiber-enriched expression pattern. The other three genes, including an actin (GhACT), a putative cellulose synthase catalytic subunit (GhCesA-5) and a putative 24-sterol-C-methyltransferase (GhSMT), were actively transcribed in fibers during the elongation stage, but their transcripts were also clearly present in other tissues. The possible roles of these proteins in cotton fiber development and growth are discussed.

L21 ANSWER 3 OF 3 MEDLINE on STN DUPLICATE 3

ACCESSION NUMBER: 2002619537 MEDLINE

DOCUMENT NUMBER: PubMed ID: 12376634

TITLE: Molecular characterization of the cotton **GhTUB1** gene that is preferentially expressed in fiber.

AUTHOR: Li Xue-Bao; Cai Lin; Cheng Ning-Hui; Liu Jian-Wei

CORPORATE SOURCE: Temasek Life Sciences Laboratory, 1 Research Link, National University of Singapore, Singapore 117604.. xbli@tll.org.sg

SOURCE: Plant physiology, (2002 Oct) 130 (2) 666-74.
Journal code: 0401224. ISSN: 0032-0889.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

OTHER SOURCE: GENBANK-AF484959; GENBANK-AF487511

ENTRY MONTH: 200302

ENTRY DATE: Entered STN: 20021012
Last Updated on STN: 20030207
Entered Medline: 20030206

AB Each fiber of cotton (*Gossypium hirsutum*) is a single epidermal cell that rapidly elongates to 2.5 to 3.0 cm from the ovule surface within about 16 d after anthesis. A large number of genes are required for fiber differentiation and development, but so far, little is known about how these genes control and regulate the process of fiber development. To investigate gene expression patterns in fiber, a cDNA, **GhTUB1**, encoding beta-tubulin was isolated from a cotton fiber cDNA library. The analyses of RNA northern-blot hybridization and reverse

transcriptase-polymerase chain reaction demonstrated that **GhTUB1** transcripts preferentially accumulated at high levels in fiber, at low levels in ovules at the early stage of cotton boll development, and at very low levels in other tissues of cotton. The corresponding **GhTUB1** gene including the promoter region was isolated by screening a cotton genomic DNA library. To demonstrate the specificity of the **GhTUB1** promoter, the 5'-flanking region including the promoter and 5'-untranslated region was fused with the beta-glucuronidase reporter gene. The expression of the reporter chimera was examined in a large number of transgenic cotton plants. Histochemical assays demonstrated that **GhTUB1::beta-glucuronidase** fusion genes were expressed preferentially at high levels in fiber and primary root tip of 1- to 3-d-old seedlings and at low levels in other tissues such as ovule, pollen, seedling cotyledon, and root basal portion. The results suggested that the **GhTUB1** gene may play a distinct and required role in fiber development. In addition, the **GhTUB1** promoter may have great potential for cotton improvement by genetic engineering.

=> D HIS

(FILE 'HOME' ENTERED AT 18:22:16 ON 21 APR 2005)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 18:22:34 ON 21 APR 2005

```

L1      39701 S (CAI, ?)/IN,AU
L2      485898 S (LI, ?)/IN,AU
L3      111183 S (CHENG, ?)/IN,AU
L4      399474 S (LIU, ?)/IN,AU
L5      959477 S L1 OR L2 OR L3 OR L4
L6      64 S L1 AND L2 AND L3 AND L4
L7      155854 S COTTON
L8      6 S L6 AND L7
L9      4 DUPLICATE REMOVE L8 (2 DUPLICATES REMOVED)
L10     12689 S .BETA-TUBULIN OR (.BETA (2W) TUBULIN) OR BETA-TUBULIN OR (BET
L11     270 S L10 AND L5
L12     10 S L11 AND COTTON
L13     4 DUPLICATE REMOVE L12 (6 DUPLICATES REMOVED)
L14     2 S L13 NOT L8
L15     3474 S (GENE OR GENES OR PROMOTER? OR ENHANCER? OR UNTRANSLATED OR R
L16     6973 S (GENE OR GENES OR PROMOTER? OR ENHANCER? OR UNTRANSLATED OR R
L17     27 S L16 AND COTTON
L18     20 S L17 NOT (L8 OR L12)
L19     14 DUPLICATE REMOVE L18 (6 DUPLICATES REMOVED)
L20     7 S GH TUB1
L21     3 DUPLICATE REMOVE L20 (4 DUPLICATES REMOVED)

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=> S CFTUB?

L22 2 CFTUB?

=> DUPLICATE REMOVE L22

DUPLICATE PREFERENCE IS 'BIOSIS, CAPLUS'

KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):N

PROCESSING COMPLETED FOR L22

L23 2 DUPLICATE REMOVE L22 (0 DUPLICATES REMOVED)

=> D IBIB AB L23 1,2

L23 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:107536 CAPLUS

DOCUMENT NUMBER: 136:146217

TITLE: Isolation and characterization of a fiber-specific
β-tubulin promoter from cotton

INVENTOR(S): Cai, Lin; Li, Xuebao; Cheng, Ninghui; Liu, Jian-Wei

PATENT ASSIGNEE(S): Institute of Molecular Agrobiolgy, Singapore
 SOURCE: PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002010377	A1	20020207	WO 2000-SG111	20000801
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1222263	A1	20020717	EP 2000-955222	20000801
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				

PRIORITY APPLN. INFO.: WO 2000-SG111 W 20000801

AB The present invention relates to a cotton β -tubulin gene **CFTUB2**, and active fragments thereof. The two **CFTUB2** promoter fragments (1.3 and 0.9 kb) were fused with the GUS gene to construct gene expression vectors for analyzing the function of the promoter. In all the transgenic cotton plants studied, GUS activity was detected only in young fibers, but not in the flower organs such as anthers, petals and sepals, or in leaves and roots. These promoters show strong fiber-specific activity. The isolated promoter may be used in improving cotton fibers to create new cotton varieties with high fiber quality and yield by gene manipulation.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 2 OF 2 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
 ACCESSION NUMBER: 2003:52487 BIOSIS
 DOCUMENT NUMBER: PREV200300052487
 TITLE: Two novel cotton genes preferentially expressed in fiber.
 AUTHOR(S): Li, Xue-Bao [Reprint Author]; Cai, Lin [Reprint Author]; Chen, Ning-Hui [Reprint Author]; Liu, Jian-Wei [Reprint Author]
 CORPORATE SOURCE: Institute of Molecular Agrobiolgy, Singapore, Singapore
 SOURCE: xbli@ima.org.sg
 Plant Biology (Rockville), (2001) Vol. 2001, pp. 184.
 print.
 Meeting Info.: Joint Annual Meetings of the American Society of Plant Biologists and the Canadian Society of Plant Physiologists. Providence, Rhode Island, USA. July 21-25, 2001. American Society of Plant Biologists; Canadian Society of Plant Physiologists.
 DOCUMENT TYPE: Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LANGUAGE: English
 ENTRY DATE: Entered STN: 22 Jan 2003
 Last Updated on STN: 22 Jan 2003

=> D HIS

(FILE 'HOME' ENTERED AT 18:22:16 ON 21 APR 2005)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 18:22:34 ON 21 APR 2005

L1 39701 S (CAI, ?)/IN,AU
L2 485898 S (LI, ?)/IN,AU
L3 111183 S (CHENG, ?)/IN,AU
L4 399474 S (LIU, ?)/IN,AU
L5 959477 S L1 OR L2 OR L3 OR L4
L6 64 S L1 AND L2 AND L3 AND L4
L7 155854 S COTTON
L8 6 S L6 AND L7
L9 4 DUPLICATE REMOVE L8 (2 DUPLICATES REMOVED)
L10 12689 S .BETA-TUBULIN OR (.BETA (2W) TUBULIN) OR BETA-TUBULIN OR (BET
L11 270 S L10 AND L5
L12 10 S L11 AND COTTON
L13 4 DUPLICATE REMOVE L12 (6 DUPLICATES REMOVED)
L14 2 S L13 NOT L8
L15 3474 S (GENE OR GENES OR PROMOTER? OR ENHANCER? OR UNTRANSLATED OR R
L16 6973 S (GENE OR GENES OR PROMOTER? OR ENHANCER? OR UNTRANSLATED OR R
L17 27 S L16 AND COTTON
L18 20 S L17 NOT (L8 OR L12)
L19 14 DUPLICATE REMOVE L18 (6 DUPLICATES REMOVED)
L20 7 S GHTUB1
L21 3 DUPLICATE REMOVE L20 (4 DUPLICATES REMOVED)
L22 2 S CFTUB?
L23 2 DUPLICATE REMOVE L22 (0 DUPLICATES REMOVED)

(FILE 'HOME' ENTERED AT 18:43:20 ON 21 APR 2005)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 18:43:36 ON 21 APR 2005

L1 . 2 S GH-1 AND (COTTON OR GOSSYPIMUM OR HIRSUTUNI)
L2 2 DUPLICATE REMOVE L1 (0 DUPLICATES REMOVED)
L3 1143 S GH-1
L4 1 S L3 AND TUBULIN
L5 8281 S (DANG, ?)/IN,AU
L6 2289 S (HEINEN, ?)/IN,AU
L7 95276 S (ALLEN, ?)/IN,AU
L8 3 S L5 AND L6 AND L7
L9 3 DUPLICATE REMOVE L8 (0 DUPLICATES REMOVED)
L10 105818 S L5 OR L6 OR L7
L11 245 S L10 AND COTTON
L12 7 S GHTUB1 OR GHTUB2
L13 0 S L12 AND L10
L14 3 DUPLICATE REMOVE L12 (4 DUPLICATES REMOVED)
L15 496 S FIBER-SPECIFIC
L16 3907 S (FIBER (3N) SPECIFIC?)
L17 23 S L16 AND L10
L18 0 S L17 AND TUBULIN
L19 0 S L17 AND ACTIN
L20 21 S L17 NOT L8
L21 13 DUPLICATE REMOVE L20 (8 DUPLICATES REMOVED)
L22 7 S L21 AND COTTON